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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/589,659	08/16/2006	Horst Binder	294826US0PCT	9973
22850 7590 04/16/2010 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER LEONARD, MICHAEL L.				
ART UNIT 1796		PAPER NUMBER		
NOTIFICATION DATE 04/16/2010		DELIVERY MODE ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com  
oblonpat@oblon.com  
jgardner@oblon.com

### Office Action Summary

**Application No.**

10/589,659

**Applicant(s)**

BINDER ET AL.

**Examiner**

MICHAEL LEONARD

**Art Unit**

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**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 February 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10, 12 and 13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12 and 13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/GS-08)  
Paper No(s)/Mail Date 02/02/2010

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

The examiner regrets the delay in submitting the prior art and reasons presented below in previous office actions.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-6 and 9-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 3,954,684 to Farrissey et al. in view of U.S. Patent Pub. No. 2004/0186194 to Joern et al.

As to claims 1-2, Farrissey discloses a novel catalyst combination for the trimerization of polyisocyanates to polyisocyanurates wherein the catalyst combination comprises a tertiary amine trimerization catalyst and a quaternary ammonium salt of an alkanolic acid (Abstract). Farrissey discloses the use of alkanolic acids, such as acetic acid, butyric acid, and valeric acid.

Farrissey fails to disclose the use of alpha-hydroxy containing carboxylic acids.

Joern discloses the use of carboxylic acids in combination with a trimerisation catalyst (tertiary amines) that leads to improved processing and higher isocyanurate conversion, wherein the carboxylic acids are selected from a list that includes hydroxy benzoic acid, citric acid, glycolic acid, lactic acid, as well as acetic acid. (0009 and 0012).

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The examiner is taking the position that it is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose.... [T]he idea of combining them flows logically from their having been individually taught in the prior art. In re Kerkhoven, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980). The fact that Joern discloses the same carboxylic acids as the primary reference to Farrissey as well as carboxylic acids containing alpha-hydroxy groups leads a person of ordinary skill in the art to substitute one carboxylic acid for the other and would expectedly arrive at the claimed invention, because the carboxylic acids were implemented in both cases to increase isocyanurate conversion as evidenced by Farrissey (Column 2, lines 22-27) and Joern (0009 and 0012).

If it is the applicants' position that this would not be the case: (1) evidence would need to be provided to support the applicants' position; and (2) it would be the Office's position that the application contains inadequate disclosure that there is no teaching as to how to obtain the claimed properties with only the claimed ingredients.

"A consisting essentially of' claim occupies a middle ground between closed claims that are written in a consisting of' format and fully open claims that are drafted in a comprising' format." PPG Industries v. Guardian Industries, 156 F.3d 1351, 1354, 48 USPQ2d 1351, 1353-54 (Fed. Cir.1998). See also Atlas Powder v. E.I. duPont de Nemours & Co., 750 F.2d 1569, 224 USPQ 409 (Fed. Cir. 1984); In re Janakirama-Rao, 317 F.2d 951, 137 USPQ 893 (CCPA 1963);

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Water Technologies Corp. vs. Calco, Ltd., 850 F.2d 660, 7 USPQ2d 1097 (Fed. Cir. 1988). For the purposes of searching for and applying prior art under 35 U.S.C. 102 and 103, absent a clear indication in the specification or claims of what the basic and novel characteristics actually are, "consisting essentially of" will be construed as equivalent to "comprising." See, e.g., PPG, 156 F.3d at 1355, 48 USPQ2d at 1355 ("PPG could have defined the scope of the phrase consisting essentially of for purposes of its patent by making clear in its specification what it regarded as constituting a material change in the basic and novel characteristics of the invention.").

Therefore, the consisting essentially of language of the instant claim is read on as comprising and even though the primary reference to Farrissey discloses the use of tertiary amines in combination with the ammonium carboxylates, a person of ordinary skill in the art would assume that the tertiary amine component does not materially affect the basic and novel characteristics of the claimed invention because it is used for the same purpose (isocyanurate conversion).

If an applicant contends that additional steps or materials in the prior art are excluded by the recitation of "consisting essentially of," applicant has the burden of showing that the introduction of additional steps or components would materially change the characteristics of applicant's invention.

As to claims 3 and 5, Farrissey discloses tribenzylmethylammonium, and tetramethylammonium (Column 3, lines 42-50).

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As to claims 4 and 6, discloses the use of carboxylic acids in combination with a trimerisation catalyst that leads to improved processing and higher isocyanurate conversion, wherein the carboxylic acids are selected from a list that includes hydroxy benzoic acid, citric acid, glycolic acid, lactic acid, etc. (0009 and 0012).

As to claim 9, with regard to the total chlorine content, the Office realizes that all of the claimed effects or physical properties are not positively stated by the reference. However, the reference teaches all of the claimed ingredients. Therefore, the claimed effects and physical properties, i.e. chlorine content would implicitly be achieved by a composite with all the claimed ingredients. If it is the applicants' position that this would not be the case: (1) evidence would need to be provided to support the applicants' position; and (2) it would be the Office's position that the application contains inadequate disclosure that there is no teaching as to how to obtain the claimed properties with only the claimed ingredients.

As to claim 10, Joern discloses HDI and IPDI as suitable polyisocyanates (0020).

As to claims 12-13, Farrissey discloses polyurethane coatings prepared from the polyisocyanurate components (Column 6, line 34).

It is noted that claims 12-13 claim polyurethane coating, all elected claims are recited in the product-by-process format by use of the language, "A polyurethane coating comprising polyisocyanates prepared by the process of claim 1..." and "comprising a polyisocyanates prepared by the process of claim

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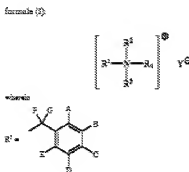
1..." Case law holds that: Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. See *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

To the extent that the process limitations in a product-by-process claim do not carry weight absent a showing of criticality, the reference discloses the claimed product in the sense that the prior art product structure is seen to be no different from that indicated by the claims.

Claims 1-10, and 12-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 7,001,973 to Kohlstruck et al. (US Patent Pub No. 2003/0187178) in view of U.S Patent Pub. No. 2004/0186194 to Joern et al.

As to claims 1-3 and 5, Kohlstruck discloses a process for preparing low-viscosity polyisocyanate and polyisocyanate of reduced color containing isocyanurate groups, which comprises partially trimerizing aliphatic and/or cycloaliphatic diisocyanates in the presence of 0.02 to 2% by weight of at least one trimerization catalyst of the following formula:

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Wherein y is R<sup>6</sup>COO<sup>-</sup> (Column 3-4) and A, B, C, D, and E simultaneously or independently of one another are hydrogen, chloro, C<sub>1</sub>-C<sub>4</sub>-alkyl, etc. (Column 3, lines 57-65). Kohlstruch further discloses benzylammonium carboxylates of hexanoic acid, acetic acid, 2-ethylhexanoic acid, etc. (Column 7, lines 35-38).

Kohlstruch fails to disclose alpha-hydroxy carboxylic acids.

Joern discloses the use of carboxylic acids in combination with a trimerisation catalyst (tertiary amines) that leads to improved processing and higher isocyanurate conversion, wherein the carboxylic acids are selected from a list that includes hydroxy benzoic acid, citric acid, glycolic acid, lactic acid, as well as acetic acid (0009 and 0012).

The examiner is taking the position that it is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose.... [T]he idea of combining them flows logically from their having been individually taught in the prior art. In re Kerkhoven, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980). The fact that Joern discloses the same carboxylic acids as the primary reference to Kohlstruch as well as carboxylic



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acids containing alpha-hydroxy groups would lead a person of ordinary skill in the art to substitute one carboxylic acid for the other to expectedly arrive at the claimed invention, because the carboxylic acids were implemented in both cases to increase isocyanurate conversion as evidenced by Kohlstruch (Column 3, lines 27-35) and Joern (0009 and 0012). The examiner is concluding from the prior art that the use of carboxylic acids for isocyanurate conversion is known and that from the disclosure of Joern the carboxylic acid can be chosen from alpha-hydroxy, beta-hydroxy or no-hydroxy and the conversion from isocyanate to isocyanurate will still proceed.

If it is the applicants' position that this would not be the case: (1) evidence would need to be provided to support the applicants' position; and (2) it would be the Office's position that the application contains inadequate disclosure that there is no teaching as to how to obtain the claimed properties with only the claimed ingredients.

As to claims 4 and 6, discloses the use of carboxylic acids in combination with a trimerisation catalyst that leads to improved processing and higher isocyanurate conversion, wherein the carboxylic acids are selected from a list that includes hydroxy benzoic acid, citric acid, glycolic acid, lactic acid, etc. (0009 and 0012).

As to claim 7-8, Kohlstruch discloses deactivating the catalyst with bis(2-ethylhexyl) phosphate (Column 2, line 17) and dibutyl phosphate (Column 4, line 27).

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As to claim 9, with regard to the total chlorine content, the Office realizes that all of the claimed effects or physical properties are not positively stated by the reference. However, the reference teaches all of the claimed ingredients. Therefore, the claimed effects and physical properties, i.e. chlorine content would implicitly be achieved by a composite with all the claimed ingredients. If it is the applicants' position that this would not be the case: (1) evidence would need to be provided to support the applicants' position; and (2) it would be the Office's position that the application contains inadequate disclosure that there is no teaching as to how to obtain the claimed properties with only the claimed ingredients.

As to claim 10, Kohlstruck disclose IPDI and HDI as suitable polyisocyanates (Column 4, lines 50-52).

As to claims 12-13, Kohlstruck discloses that the polyisocyanurates are valuable for one and two component polyurethane systems for weather and light-stable polyurethane coatings (Column 5, lines 47-52).

### ***Response to Arguments***

Applicant's arguments, see Arguments, filed 02/02/2101, with respect to the rejection(s) of Claims 1-3, 5, 7, 10, and 12-13 to JP-2002-097244 to Ito et al., Claims 4 and 6 to JP-2002-097244 to Ito et al. in view of U.S. Patent Pub. No. 2004/0186194 to Joern et al., and Claim 8 to JP-2002-097244 to Ito et al. in view of U.S. Patent No. 5,489,663 to Brandt et al. have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon

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further consideration, a new ground(s) of rejection is made in view of U.S. Patent No. 7,001,973 to Kohlstruck et al. (US Patent Pub No. 2003/0187178) in view of U.S Patent Pub. No. 2004/0186194 to Joern et al. and U.S. Patent No. 3,954,684 to Farrissey et al. in view of U.S Patent Pub. No. 2004/0186194 to Joern et al.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL LEONARD whose telephone number is (571)270-7450. The examiner can normally be reached on Mon-Fri 7:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Milton I. Cano/  
Supervisory Patent Examiner, Art Unit 1796

/MICHAEL LEONARD/  
Examiner, Art Unit 1796